



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Kelley et al.

Serial No.: 10/809,535

Filed: 3/24/2004

Title: COMPOSITIONS AND METHODS  
FOR POLISHING COPPER

Attorney Docket No.: 02009US

Group Art Unit:

2812

Examiner:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Information Disclosure Statement is submitted:

- ☒ under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)
- ☐ under 37 CFR 1.97(c) together with either a:  
☐ Statement under 37 CFR 1.97(e), or  
☐ a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with a:  
☐ Statement under 37 CFR 1.97(e), and  
☐ a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action or notice of allowance, whichever occurs first, but before payment of the issue fee)

On December 7, 2001, Rohm and Haas Electronic Materials CMP Inc. (fka Rodel, Inc.) began preparing an abrasive-free polishing solution for sale.

The solution contained the following by weight percent:

0.3 Benzotriazole  
0.22 Malic Acid  
0.15 Carboxymethylcellulose (50K with a 0.7 degree of substitution)  
0.09 Polyacrylic Acid (30K)  
0.09 Polyacrylic Acid (250K)  
9.0 Hydrogen Peroxide

Titrant: Ammonium hydroxide/nitric acid

pH without titrant 3.6

pH with titrant 3.4

In addition, applicants have included a copy of copending applications U.S. Serial No. 10/712,446 filed November 13, 2003 entitled "Compositions and Methods for Polishing Copper" and U.S. Serial No. 10/742,961 filed December 22, 2003 entitled "Compositions and Methods for Low Downforce Pressure Polishing of Copper".

X Applicant(s) submit herewith Form PTO 1449-Information Disclosure Citation listing patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

The relevance of the attached and above noted references is that this is the closest art of which Applicant is aware.

Applicant submits that the above references taken alone or in combination neither anticipate nor render obvious the present invention. Consideration of the foregoing in relation to this application is respectfully requested.

It is requested that the information disclosed herein be made of record in this application.

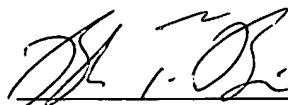
Respectfully submitted,

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or the correspondence is being facsimile transmitted to the USPTO, on the date indicated below.

Date of Deposit: 2/17/04

Typed Name: Barbara A. Wiley

Signature: Barbara A. Wiley



Blake T. Biederman

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Reg. No. 34,124

Date: December 16, 2004

Telephone No.: 302-283-2136



PTO/SB/08a (08-03)  
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<b>Substitute for form 1449A/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/809,535
				Filing Date	3/24/2004
				First Named Inventor	Kelley et al.
				Art Unit	2812
Sheet	1	of	1	Examiner Name	
				Attorney Docket Number	02009US

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
		6,117,775	09-12-2000	Kondo et al.	
		6,326,299 B1	12-04-2001	Homma et al.	
		6,562,719 B2	05-13-2003	Kondo et al.	
		6,585,568 B2	07-01-2003	Tsuchiya et al.	
		6,605,537 B2	08-12-2003	Bian et al.	
		6,620,037 B2	09-16-2003	Kaufman et al.	
		6,632,259 B2	10-14-2003	Weinstein et al.	
		2003/0181345 A1	09-25-2003	Bian	
		2003/0219982 A1	11-27-2003	Kurata et al.	
		2004/0023492 A1	02-05-2004	Bian et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
		EP 1 211 717 A1	06-05-2002	Hitachi Chemical Company, Ltd.		
		EP 1 223 609 A1	07-17-2002	Hitachi Chemical Company, Ltd.		
		WO 99/64527 A1	12-16-1999	Rodel Holdings, Inc.		
		WO 01/14496 A1	03-01-2001	Rodel Holdings, Inc.		
		WO 02/094957 A2	11-28-2002	Rodel Holdings, Inc.		

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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